

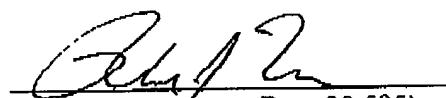
number:X80678, does not permit the claims to SEQ.ID.NO. 1 to use broad open-ended language. The probe based on SEQ.ID.NO 1 is now claimed in claim 37 using "consists of" language.

These amendments are made without prejudice or disclaimer and Applicant reserves the right to pursue the full scope of the claimed subject matter to probes "consisting essentially of" the sequence of SEQ ID NO: 1 in co-pending application Serial No. 09/027,439.

It is believed that the application is in condition for allowance, which action is respectfully requested.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



Richard J. Traverso (Reg. 30,595)  
Attorney/Agent for Applicant(s)

MILLEN, WHITE, ZELANO & BRANIGAN, P.C.  
Arlington Courthouse Plaza 1, Suite 1400  
2200 Clarendon Boulevard  
Arlington, Virginia 22201  
Telephone: (703) 243-6333  
Facsimile: (703) 243-6410

**FILED: June 5, 2002**

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VERSION WITH MARKINGS TO SHOW CHANGES MADEIN THE CLAIMS:

*Please amend the claims as indicated:*

20. (Twice amended) The method of claim 19, wherein an oligonucleotide ~~consisting essentially of comprising~~ SEQ ID NO: 1 is used to discriminate between or among Shigella and Escherichia.

21. (Twice amended) The method of claim 19, wherein an oligonucleotide ~~consisting essentially of comprising~~ SEQ ID NO: 2 is used to discriminate between or among Shigella and Escherichia.

22. (Twice amended ) The method of claim 19, wherein an oligonucleotide ~~consisting essentially of comprising~~ SEQ ID NO: 3 is used to discriminate between or among Shigella and Escherichia.

23. (Twice amended ) The method of claim 19, wherein an oligonucleotide ~~consisting essentially of comprising~~ SEQ ID NO: 4 is used to discriminate between or among Shigella and Escherichia.

24. (Twice amended) The method of claim 19, wherein an oligonucleotide of RNA is used, wherein the oligonucleotide sequence ~~consists essentially of comprises~~ a sequence selected from the group consisting of SEQ. ID. Nos.: 1, 2, 3 and 4, and wherein U substitutes for T.

25. (Twice amended ) A nucleic acid probe ~~consisting essentially of comprising~~ the sequence of ~~SEQ ID NO. 1, 2 or 3 SEQ ID NO: 2 or 3~~, which distinguishes between species of Shigella in a hybridization assay, or distinguishes between Shigella and E. coli in a hybridization assay.

26. (Amended) A method for discriminating between species of Shigella and E. coli or for discriminating among species of Shigella and E. coli in a sample containing organisms of one or more taxonomic groups comprising:

- a. selecting an oligonucleotide having a sequence from a RNA operon, wherein the sequence differs by one or more bases from at least one of the operons from the two or more species being discriminated, and wherein the oligonucleotide discriminates between species after hybridization by the use of two or more wash temperatures at or above the oligonucleotide's calculated or experimentally determined  $T_m$ ;
- b. hybridizing the oligonucleotide to nucleic acid from the sample; and
- c. determining the presence or absence of hybridizing nucleic acid,

wherein said oligonucleotide consists of comprises a sequence selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3 and SEQ ID NO: 4.

36. ~~The nucleic acid probe of claim 25, which consists essentially of the sequence of SEQ ID NO. 1.~~

37. (Amended) ~~A~~ The nucleic acid probe of claim 25, which consists of the sequence of SEQ ID NO: 1 which distinguishes between species of Shigella in a hybridization assay, or distinguishes between Shigella and E. coli in a hybridization assay.

38. (Amended) The nucleic acid probe of claim 25, which comprises consists essentially of the sequence of SEQ ID NO: 2.

40. (Amended) The nucleic acid probe of claim 25, which comprises consists essentially of the sequence of SEQ ID NO: 3.

42. (Amended) A kit, comprising 3 probes, which are a probe which comprises consists essentially of the sequence of SEQ ID NO: 1, a probe which comprises consists essentially of consists the sequence of SEQ ID NO: 2, and a probe which comprises consists essentially of the sequence of SEQ ID NO: 3.

44. (Amended) The kit of claim 42, further comprising a probe which comprises consists essentially of the sequence of SEQ ID NO: 4.

45. (Amended) The kit of claim 43, further comprising a probe which comprises consists essentially of the sequence of SEQ ID NO: 4.